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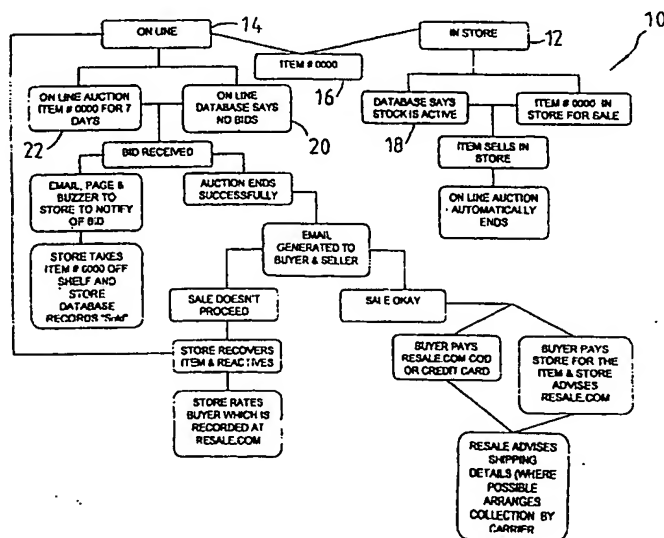
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[Continued on next page]

(54) Title: SYSTEM FOR TRADING PRODUCTS



(57) Abstract: A trading system (10) comprises one or more virtual sites (14) offering products for sale online and one or more physical sites (12) offering products for sale in store; an inventory management arrangement having an inventory transferring means adapted for transferring inventory data of the products stored in a product database (18) associated with the one or each physical site to a computer server (20) associated with the or each corresponding virtual site, monitoring means adapted to monitor trading status of at least the products available for trading online, and messaging means adapted to provide a message about any change of trading status of the products to the or each physical site corresponding to the respective virtual sites.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

SYSTEM FOR TRADING PRODUCTS
TECHNICAL FIELD OF THE INVENTION

THIS INVENTION relates to a system for trading products available at a physical site and at a virtual site.

5 BACKGROUND OF THE INVENTION

Advances made to the browser technology, modem technology and the Internet have made Internet surfing a relatively easy matter. Consequently an increasing number of people are using the Internet to share and to obtain information stored on computer servers at web sites that are accessible over the Internet. Many traders see the Internet as means to expand their customer base and are now posting information about their products on web sites in order to attract customers from different regions within and outside their own countries.

10 In recent years some of the traders have begun to trade posted products online. Web pages of the posted products may include photo images and brief descriptions and prices of the products. As product descriptions and pricing are entered manually only limited number of products can be posted online. Inventory tracking of the posted products is accordingly labourious and generally not up to date as the inventory can be updated only sometime after sale.

15 Where a trader have products for sale on a virtual site (e.g. web site) and at a physical site (e.g. shop) the products available at the virtual site must be set aside in order to ensure their availability. This means that the trader must have a higher number of products in stock and therefore a higher cash flow in running the business. Where products are not set aside for online trading their trading status must be monitored constantly by staff members in order to restock and to ensure availability.

20 OBJECT OF THE INVENTION

An object of the present invention is to alleviate or to at least reduce to a certain level one or more of the prior art disadvantages.

OUTLINE OF THE INVENTION

30 In one aspect therefore the present invention resides in a system for trading

products. The system comprises one or more virtual sites and one or more physical sites, and the products are available for trading online at the one or more virtual sites and at the one or more physical sites. The system further comprises an inventory management arrangement having an inventory transferring means adapted for transferring inventory data of the products stored in a product database associated with the one or each physical site to a computer server associated with the or each corresponding virtual site, monitoring means adapted to monitor trading status of at least the products available for trading online, and messaging means adapted to provide a message about any change of trading status of the products to the or each physical site corresponding to the respective virtual sites.

The inventory management arrangement may be configured to communicate with said computer server associated with the or each corresponding virtual site, and said product database of the one or each physical site, over a communications network. The communications network may include a telephone network, a local area network, an intra network, a wide area network and/or the Internet.

The or each said virtual site is preferably an Internet web site that can be accessed for viewing the available products thereon over the communications network. Typically access is by means of a client communications terminal such as a computer equipped with a communications interface such as a browser program that is in connection with said communications network.

The online trading may be in the form of auctioning and/or retailing. For auctioning the system further comprises a bid submission arrangement for submissions of bids for the products to be traded by auction, and an optimum bid determining means arranged to determine an optimum bid from the submitted bids for each product for auctioning. The optimum bid for each product for auctioning can be based on the highest bid therefor submitted within a predetermined time period following commencement of auction for this product. Alternatively the optimum bids can be based on first bids above respective reserved prices for the products.

In preference the monitoring means is configured to change the trading status of any product to indicate that it is no longer available when a bid for it is

submitted online or when it is sold or out of stock at a physical site, and to initiate said messaging means to signal the changed trading status to the virtual site or sites at which the product is trading. The computer server(s) on receiving the signal typically removes the product from trading at the virtual site(s).

5 Desirably, when a bid for a product available online has been submitted or when an optimum bid has been determined or when the product is sold the monitoring means changes the trading status of the product to indicate that it is no longer available, and to initiate said messaging means to signal the changed trading status to the physical site at which the product is traded. On receiving the signal an
10 operator at the physical site takes action to stop trading on the product at the physical site. This ensures that the online trading products are always available when they are purchased.

The messaging means is configured to send a message advising the customer who submitted the optimum bid that the bid is successful.

15 The system of the present invention may have a payment arrangement for customers to pay for products online. Payment online may be made by an electronic transfer of funds, or by direct debit from a bank account, credit card, money order or cash on delivery (COD). The payment arrangement may also require the customers to provide delivery address for shipping the purchased goods.

20 Where the purchase does not proceed following receipt of the signal from the messaging means the operator can change the status of the product on the product database to indicate that it is available for sale. The inventory transferring means then in response to the changed status transfers the changed status to the computer server(s) associated with the virtual site(s) where the product is traded
25 online.

The system of the present invention desirably has a refund arrangement for products returned following purchase. The refund arrangement for products purchased online typically involves the messaging means sending trading identification numbers for the trades of the returned products and reasons for return
30 to the virtual sites that traded them. Each of the virtual sites concerned then allocates a refund approval reference for each returned product and instructs the

messaging means to send a refund approval message including the refund approval reference to the customer. The customer on receiving the refund message then can apply for refund by providing both the trading identification number and the refund approval reference. Final approval of the refund is allowed only upon verification of information provided in the refund application.

The system is preferably arranged so that at least its product database is integrated with a point of sale (POS) system at the or each physical site so that the database is automatically updated for any trade made at said physical site. Accordingly the monitoring means can change the trade status of products that are no longer available at the physical site(s) and the system then instructs the messaging means to send a signal to indicate accordingly to the virtue site(s).

BRIEF DESCRIPTION OF THE DRAWINGS

In order that the system of the present invention can be readily understood and put in practically effect the description will now refer to the accompanying drawings which illustrate non-limiting embodiments of the present invention and wherein:-

Figure 1 is a flow diagram showing major steps of one embodiment of the trading system according to the present invention;

Figure 2 is a flow diagram showing certain of the steps when trading a specific product using the system according to the present invention; and

Figure 3 is a flow diagram showing a refund arrangement of traded products in an embodiment of the trading system according to the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring initially to the trading system 10 according to the present invention shown in Figure 1, the system 10 as shown comprises a physical site or store 12 and a virtual site or web site 14. A product 16 identified as item # 0000 is posted for trading in the form of online auction at the web site 14. The product 16 is also available for sale at the store 12 and is kept on a display shelf.

At the store 12 there is a computer having a product database 18 which stores product item numbers, product availability status, and other product details. In this embodiment the item # 0000 is indicated as available for sale in store.

The web site 14 also has a product database 20 to which a transferring means of the system 10 uploads details and status of the products on the database 18 that are for trading on the web site 14. As can be seen in box 22 the web site database 20 has an online trading field and a trading period field.

5 The database 18 is integrated with the in-store POS . This allows the database 18 to be updated whenever new products are added to the product inventory, and when sales are made. The database 18 is therefore automatically kept up to date when changes to the database 18 are made on the in-store POS.

10 When the product 16 at store 12 is sold and assuming it is out of stock a product monitoring means on detecting the changed trading status, sends a signal to the web site 14 to stop trading on the product 16.

15 The monitoring means also monitors the product trading status of the products trading online. When a bid for the product 16 is submitted the bid is stored in the online database 20. The monitoring means on detecting an optimum bid, signals the in-store POS accordingly and changes the product status of the product 16 on the database 18 to "Sold". The operator at the store 12 takes the product 16 off the shelf until receiving advice that the sale has not been effected.

20 In this embodiment the highest bid submitted over an auction period of seven days is taken as the successful bid. The system 10 then instructs the messaging means to send an email to the successful bidder to inform him accordingly. A similar message is also sent to the store 12.

25 If the successful bidder wants to proceed with the purchase he may choose to make payment online at the web site 14 or directly to the store 12. The site 14 or the store 12 will advise the opposite party about the payment made. When making payment the successful bidder is also asked to provide shipping details for delivery of the purchased goods.

30 If the purchase does not proceed to completion the operator at the store retrieves the product 16 for positioning on the shelf again and reactivates its trading status. The updated database 18 will also be transferred to the online database 22 and the product is once again available for trading online.

The system 10 also includes a rating arrangement for rating bidders who submitted bids for the product 16.

The system 10 shown in Figure 2 is self explanatory and is substantially similar to the system 10 of Figure 1. The numerical references used in Figure 1 are
5 retained for similar features in Figure 2.

As can be seen the system 10 shown in Figure 2, unlike the system 10 shown in Figure 1, assumes that all successful bidders will complete transactions by paying for the products 16.

Figure 3 shows a refund process 30 of the system 10 where purchasers who
10 wish to return purchased products may return the products 16 to the store 12 and collect refunds thereat or from the web site 14.

Figure 3 shows certain steps for the refund process 30 for the product 16 (fishing rod) bought under the system 10 shown in Figure 2. At step 32 the purchaser contacts the physical store 2 about the process for a refund. At that time
15 the purchaser is advised to return the product 16 to the physical site 12. When the product 16 is returned the operator at the physical site 12 can issue a refund if the product 16 was bought at the physical site 12 (see steps 34 and 36).

If the product 16 was bought online at a web site 14 the operator, on receiving the returned product 16 (see step 38), accesses the web site 14 from
20 which the product 16 was bought for requesting a refund approval (see steps 40 and 42). As shown in step 42 the operator needs to provide his assigned password, the trading reference (Auction #), given reason for the return, and amount to be refunded. The system 10 will check to ensure that the refund is not greater than the amount paid for.

25 The system 10 then instructs the messaging means to send an email message to the purchaser. The message confirms that a refund for the product 16 has been approved and indicates the refund approval number (see step 44).

The purchaser then can claim the refund by accessing the refund page of the web site 14 and filling in a refund form that requires both the trading reference and
30 the refund approval number (see steps 46 and 48). When the system 10 has verified

the refund application details (see step 50) the purchaser is invited to nominate the preferred form of refund and generates a refund accordingly (see steps 52 and 54).

Whilst the above has been given by way of illustrative example of the present invention many variations and modifications thereto will be apparent to those skilled in the art without departing from the broad ambit and scope of the invention as herein set forth.

CLAIMS

1. A system for trading products, the system comprises one or more virtual sites and one or more physical sites, the products being available for trading online at the one or more virtual sites and at the one or more physical sites; an inventory management arrangement having an inventory transferring means adapted for transferring inventory data of the products stored in a product database associated with the one or each physical site to a computer server associated with the or each corresponding virtual site; monitoring means adapted to monitor trading status of at least the products available for trading online; and messaging means adapted to provide a message relating to any change of trading status of the products to the or each physical site corresponding to the respective virtual sites.
2. The system according to claim 1 wherein the inventory management arrangement being configured to communicate with said computer server associated with the or each corresponding virtual site, and said product database associated with the one or each physical site, over a communications network.
3. The system according to claim 2 wherein the communications network including a telephone network, a local area network, an Intranet, a wide area network and/or the Internet.
4. The system according to claim 2 or 3 wherein the or each said virtual site is an Internet web site accessible over the Internet for viewing the available products thereon by means of a client communications terminal equipped with a communications interface.
5. The system according to any one of claims 1 to 4 wherein the online trading is in the form of auctioning and/or retailing said products, for auctioning online the system further comprising a bid submission arrangement for submissions of bids for the products to be traded by auction, and an optimum bid determining means arranged to determine an optimum bid from the submitted bids for each product for auctioning.
6. The system according to claim 5 wherein the optimum bid for each product for auctioning is based on the highest bid therefor submitted within a predetermined

time period following commencement of auction for this product, or based on first bids above respective reserved prices for the products.

7. The system according to any one of claims 1 to 6 wherein the monitoring means is configured to change the trading status of any product for indicating that it is no longer available when an optimum bid for it is submitted online or when it is sold or out of stock at a physical site, and to initiate said messaging means to signal the changed trading status to the virtual site or sites at which the product is trading; the computer server(s) on receiving the signal removes the product from trading at the virtual site(s).

8. The system according to claim 7 wherein when a bid for a product available online has been submitted or when an optimum bid has been determined or when the product is sold the monitoring means changes the trading status of the product to indicate that it is no longer available, and to initiate said messaging means to signal the changed trading status to the physical site at which the product is traded, for indicating to an operator at the physical site to take action to stop trading on the product at the physical site.

9. The system according to claim 7 or 8 wherein the messaging means is configured to send a message advising the customer who submitted the optimum bid that the bid is successful.

10. The system according to any one of claims 1 to 9 wherein the system including a payment arrangement for making payments online by an electronic transfer of funds, or by direct debit from a bank account, credit card, money order or cash on delivery (COD).

11. The system according to claim 10 wherein the payment arrangement is arranged to receive and store delivery address for shipping the purchased products during or following making of payments online.

12. The system according to claim 8 or 9 wherein the monitoring is adapted to monitor payment for completing a purchase within a predetermined time limit, and where the purchase does not complete within the time limit following receipt of the signal from the messaging means, providing an incomplete purchase signal so that the operator can change the status of the product on the product database to

indicate that it is available for sale; the inventory transferring means then in response to the changed status, transfers the changed status to the computer server(s) associated with the virtual site(s) where the product is traded online.

13. The system according to claim 10 or 11 further including a refund arrangement for products returned following purchase, the refund arrangement initiating the messaging means to send refund requests having trading identification numbers for the trades of the returned products and given reasons for the returns to the virtual sites that traded the returned products, on receiving the refund requests each of the virtual sites concerned then allocates a refund approval reference for each returned product it traded and instructs the messaging means to send a refund approval message including the refund approval reference to the respective customer.

14. The system according to any one of claims 1 to 13 wherein at least the product database is integrated with a point of sale (POS) system at the or each physical site so that the database is automatically updated for any trade registered at the POS of respective said physical site, whereby the monitoring means can change the trade status of products that are no longer available at the physical site(s) and the system then instructs the messaging means to send a signal to indicate accordingly to the virtual site(s).

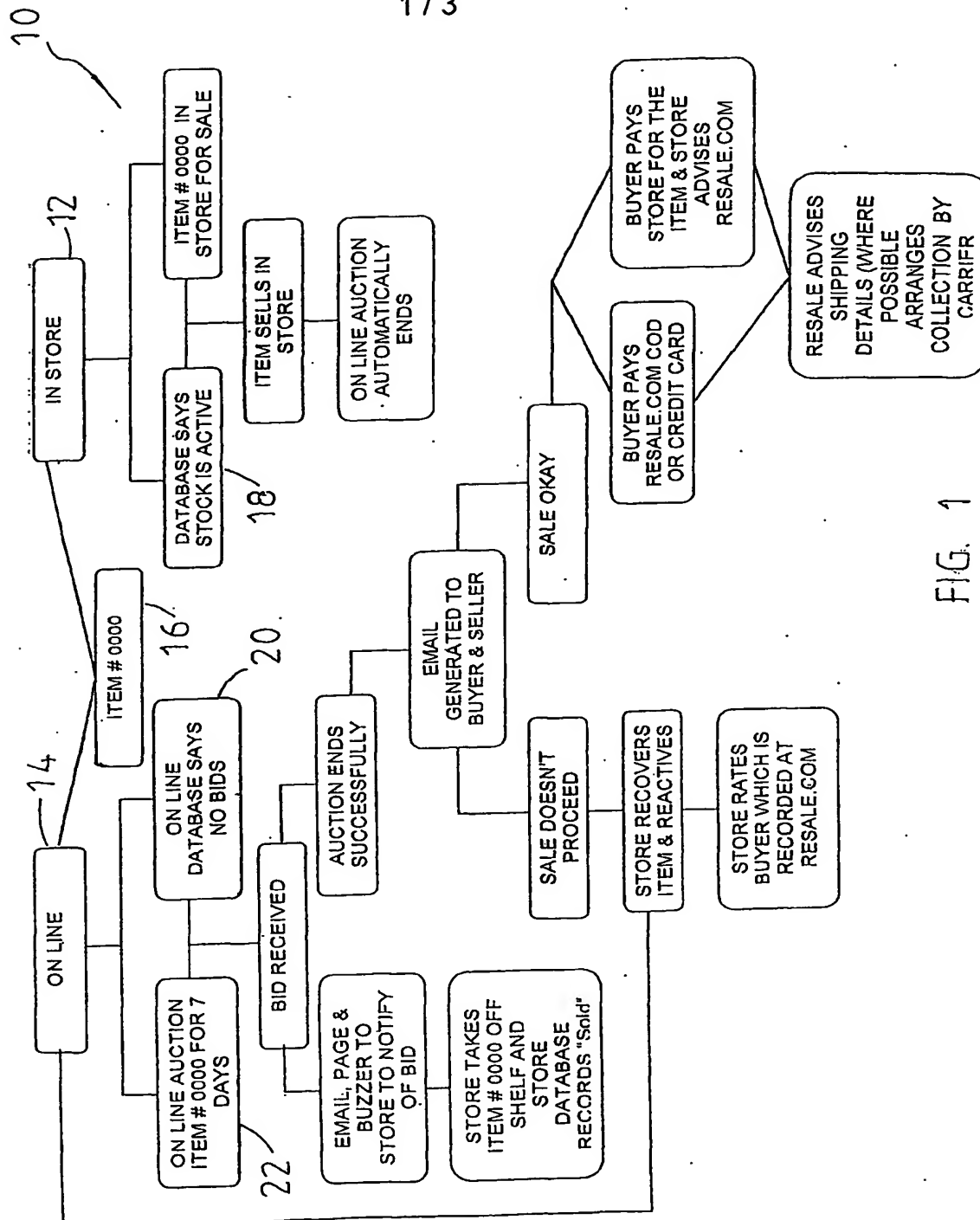


FIG. 1

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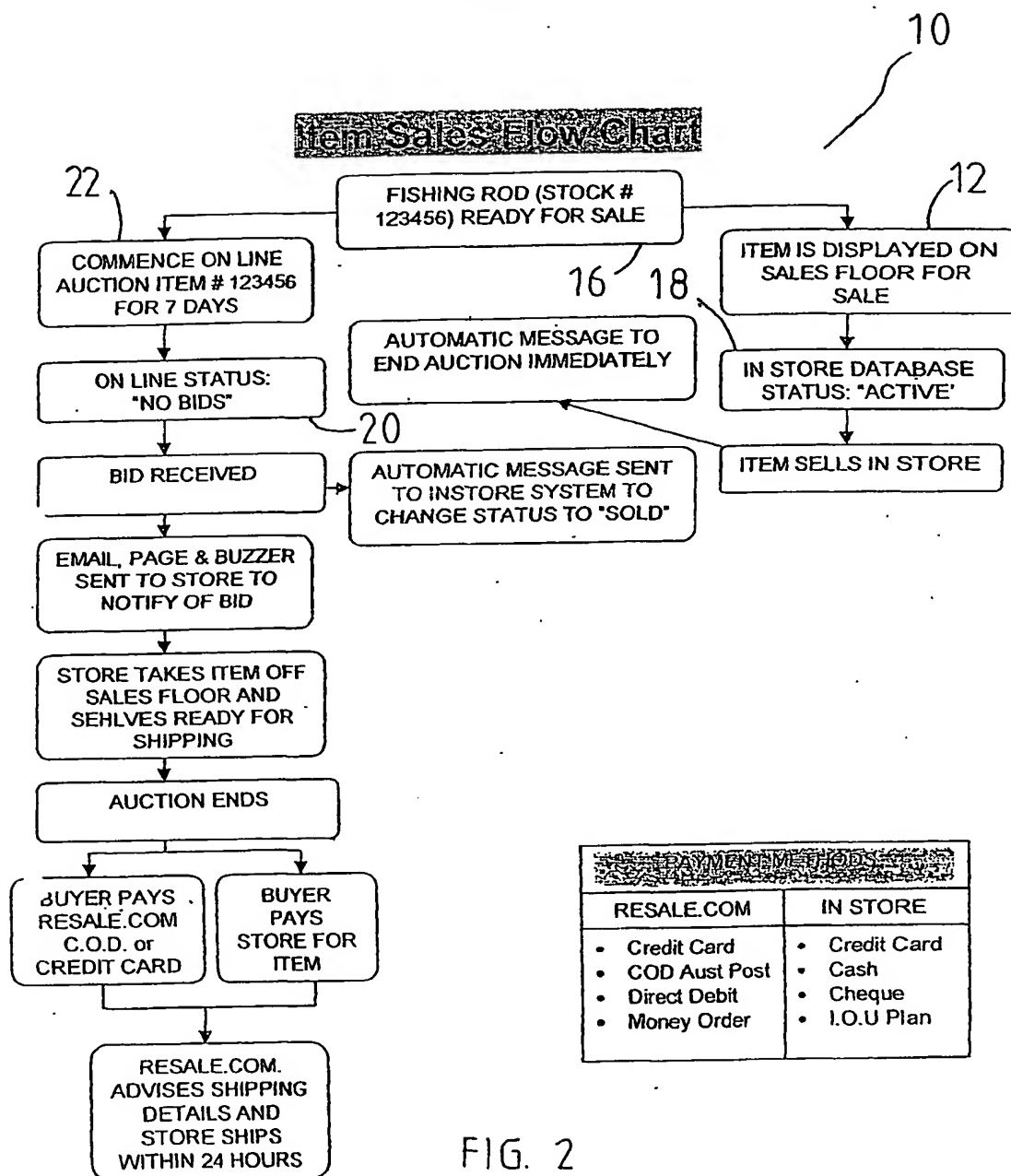


FIG. 2

3 / 3

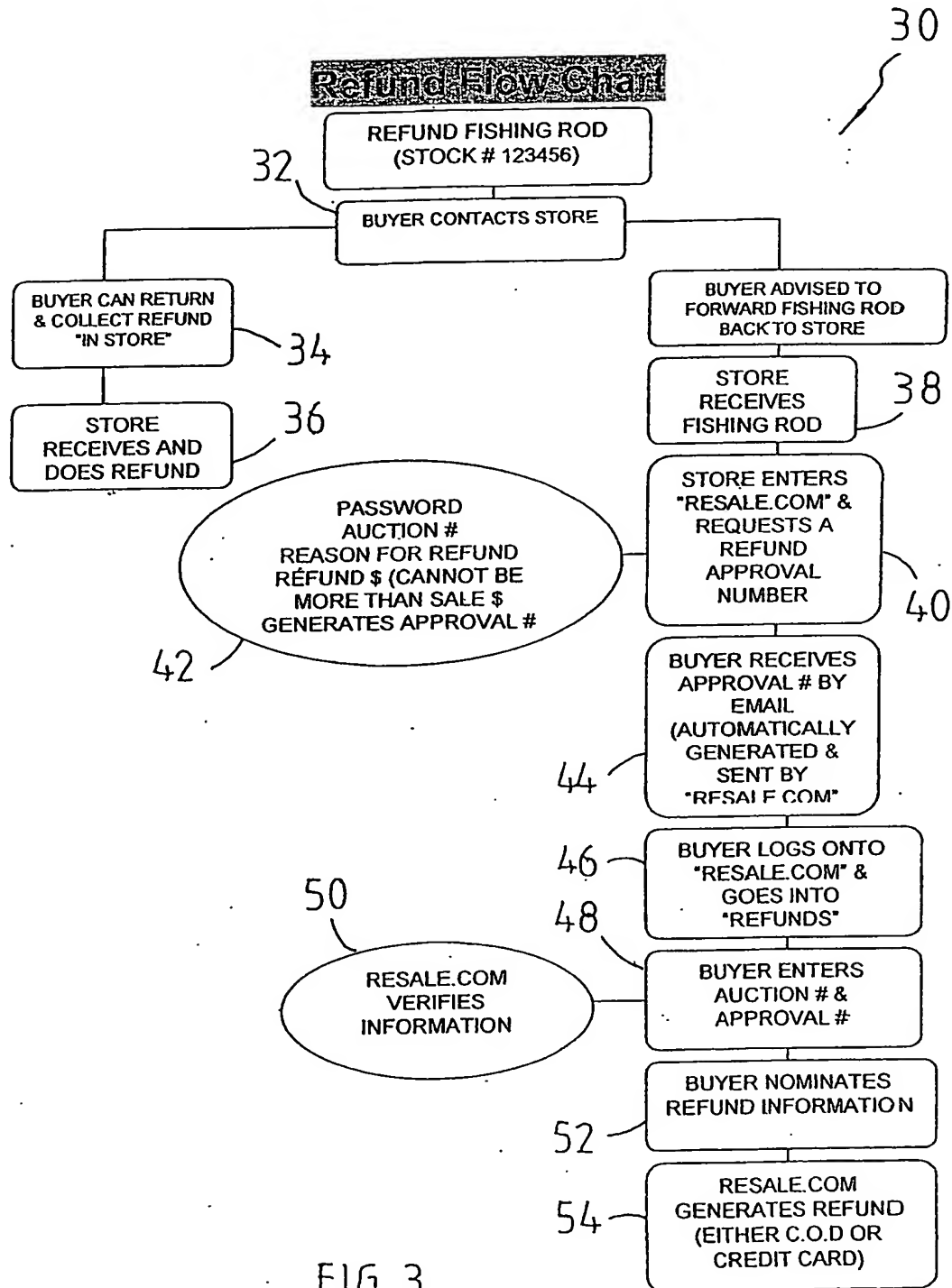


FIG. 3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU01/00984

A. CLASSIFICATION OF SUBJECT MATTER														
Int. Cl. ⁷ : G06F 17/60														
According to International Patent Classification (IPC) or to both national classification and IPC														
B. FIELDS SEARCHED														
Minimum documentation searched (classification system followed by classification symbols)														
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched AU: IPC AS ABOVE														
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI, JAPIO, G06F 17/60, trad + or sell + or vend + ; online or (online) a internet or web or www or network or (virtual site) or website or webpage; (physical site) or shop or store or warehouse).and similar words.														
C. DOCUMENTS CONSIDERED TO BE RELEVANT														
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.												
P,X	WO 01/29738 A (HYBRINET, INC.) 26 April 2001 Page 7, lines 3-7; page 8, line 10 - page 9, line 6; page 17, line 21 - page 18, line 5.	1-4, 7, 10, 11, 14												
P,A	WO 01/01313 A (CATALOG CITY INC) 4 January 2001													
P,A	WO 00/68859 A (WEBVAN GROUP, INC) 16 November 2000													
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C · <input checked="" type="checkbox"/> See patent family annex														
<table border="0"> <tr> <td>* Special categories of cited documents:</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td></td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family	"O" document referring to an oral disclosure, use, exhibition or other means		"P" document published prior to the international filing date but later than the priority date claimed	
* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention													
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone													
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art													
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family													
"O" document referring to an oral disclosure, use, exhibition or other means														
"P" document published prior to the international filing date but later than the priority date claimed														
Date of the actual completion of the international search 12 October 2001		Date of mailing of the international search report 19 OCT 2001												
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer M.E. DIXON Telephone No : (02) 6283 2194												

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU01/00984

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Derwent Abstract Accession No. 98-450439/39, Class T01 T05, JP 10187820 A (HITACHI LTD) 25 December 1996	

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU01/00984

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
WO	200129738	AU	200110988		
WO	200101313	AU	200057770	AU	200057772
		WO	200101280	WO	200101314
WO	200068859	AU	200048273	WO	200067755
					END OF ANNEX